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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,546	03/29/2001	Frederik Albert Buijtenhuijs	570-13 CON (AFP 2318)	4200

7590

04/08/2002

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EXAMINER

CINTINS, IVARS C

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 04/08/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.  
09/820,546

Applicant(s)  
Buijtenhuijs et al.

Examiner  
Ivars Cintins

Art Unit  
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Jan 14, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 and 7-13 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Fickel et al in view of Soehngen, further in view of Tymstra et al. As pointed out in the previous Office Action, Fickel et al discloses the claimed invention with the exception of the presence of a hydrophobic substance immobilized in the pores of the powdery polypropylene, and the step of regenerating this resultant material. Soehngen teaches impregnating a polyolefinic adsorbent with a hydrophobic liquid or solid, in order to enhance the hydrocarbon contaminant adsorption capability of this polyolefinic adsorbent material; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to immobilize a hydrophobic substance of the type disclosed by Soehngen into the pores of the powdery polypropylene of Fickel et al, in order to obtain the advantages disclosed by this secondary reference for the system of the primary reference. Such modification is deemed

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to be especially obvious in view of the disclosure by Fickel et al (see col. 4, lines 42-51) that active substances may be incorporated into the disclosed material. Furthermore, Tymstra et al discloses regenerating a solid oil adsorbent material with steam; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to regenerate the oil removing material of the modified primary reference in this manner, in order to allow this modified primary reference material to be reused.

Claim 6 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Fickel et al, Soehngen and Tymstra et al as applied above, and further in view of Larson et al. As pointed out in the previous Office Action, the modified primary reference discloses the claimed invention with the exception of the use of polystyrene as the immobilized hydrophobic substance. Larson et al discloses removing hydrocarbon contaminants from an aqueous stream with a foraminous material such as polypropylene foam impregnated with polystyrene; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the polystyrene of Larson et al for the immobilized hydrophobic substance of the modified primary reference, since this polystyrene is capable of enhancing the hydrocarbon removal capability of a polypropylene adsorbent

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material in substantially the same manner as the immobilized hydrophobic substance of the modified primary reference, to produce substantially the same results.

Applicant's arguments filed January 14, 2002 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that the particles of Fickel et al remove hydrocarbon constituents by adsorption, not extraction as in Applicant's process. It is pointed out, however, that upon modification of Fickel et al by the teachings of Soehngen, in the manner proposed above, the resultant material will remove hydrocarbon constituents by a combination of adsorption and extraction for the same reason that Applicant's material exhibits such a function (see col. 14, lines 2-3 of Soehngen and claim 13 of this application).

Applicant also argues that it would not have been obvious to regenerate the material of Fickel et al, as modified by Soehngen, in the manner suggested by Tymstra et al because this modified primary reference is not using the cationic surface active bonding agent which is the essence of Tymstra et al. Again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that Tymstra et al broadly teaches removing oil from a solid with steam (see page 3, lines 16-20); and given this teaching, one of

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ordinary skill in the liquid purification art would have been motivated to regenerate the impregnated polypropylene powder of the modified primary reference (i.e. a solid containing oil) in the manner suggested by Tymstra et al. The argument that, unlike Tymstra et al, Applicant's regeneration step does not result in separation of the hydrophobic substance from the granular or powdery material is not deemed to be persuasive of patentability because the steam treatment of Tymstra et al will not remove the hydrophobic substance (e.g. soybean oil and/or castor oil) from the powdery material (i.e. polypropylene) of Fickel et al for substantially the same reason that Applicant's steam treatment does not produce such a result (see claim 13).

With respect to claim 6, Applicant apparently admits that Larson et al discloses removing hydrocarbon contaminants from an aqueous stream with a foraminous material such as polypropylene foam impregnated with polystyrene (page 6, last line through page 7, line 2 of the response filed January 14, 2002), arguing instead that this reference is silent on regenerating its oil removing material. Once again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that Larson et al is not relied upon for a teaching of regenerating an oil removing material,

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since this teaching is clearly provided by Tymstra et al, as explained above.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for

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all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*Ivars C. Cintins*  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
April 7, 2002